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New combinations and synonymies for Neotropical species of Diaphorinae (Diptera: Dolichopodidae)

With 3 figures

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Summary

Based on examination of the Dolichopodidae (Diptera) material in the Senckenberg Naturhistorische Sammlung Dresden, eight Neotropical species of *Diaphorus* Meigen are herein transferred to the genus *Chrysotus* Meigen: *C. amicus* (Parent), comb. n.; *C. ciliatus* (Becker), comb. n. (= *C. superbiens* (Parent), comb. n. et syn. n.); *C. hamatus* (Parent), comb. n.; *C. vicinus* (Becker), comb. n., nec Parent; *C. luteipalpus* (Parent), comb. n.; *C. mediotinctus* (Becker), comb. n.; *C. propinquus* (Becker), comb. n. Additionally, *C. kallweiti* Capellari & Amorim, nom. n. is proposed as a replacement name for *C. vicinus* Parent, nec *C. vicinus* (Becker), comb. n., and *C. diligens* Parent is found to be a junior-synonym of *C. viridis* Becker. Lectotype and paralectotypes are designated for species with syntypes in their type-series. The *mediotinctus*-group is proposed within *Chrysotus* for a small clade including five South American species, and an identification key to the species of the group is provided.

Key words

Diaphorus, *Chrysotus*, *Dubius*, Staatliches Museum für Tierkunde Dresden

Zusammenfassung

Anhand von Untersuchungen an Material von Dolichopodidae (Diptera) der Senckenberg Naturhistorischen Sammlung in Dresden werden acht neotropische Arten der Gattung *Diaphorus* Meigen in die Gattung *Chrysotus* Meigen übertragen: *C. amicus* (Parent), comb. n.; *C. ciliatus* (Becker), comb. n. (= *C. superbiens* (Parent), comb. n. et syn. n.); *C. hamatus* (Parent), comb. n.; *C. vicinus* (Becker), comb. n., nec Parent; *C. luteipalpus* (Parent), comb. n.; *C. mediotinctus* (Becker), comb. n.; *C. propinquus* (Becker), comb. n. Zusätzlich wird *C. kallweiti* Capellari & Amorim, nom. n. als Ersatzname für *C. vicinus* Parent, nec *C. vicinus* (Becker), comb. n. vorgeschlagen. *C. diligens* Parent ist ein Junior-Synonym von *C. viridis* Becker. Für Arten, die Syntypen in ihren Typenserien enthalten, werden Lectotyp und Paralectotypen festgelegt. Die *mediotinctus*-Gruppe, darunter fünf südamerikanische Arten, wird als kleiner Zweig innerhalb von *Chrysotus* angesehen. Ein Bestimmungsschlüssel zu diesen Arten ist vorhanden.

Introduction

Dolichopodid workers have been historically challenged by the diversity of the genera *Diaphorus* Meigen and *Chrysotus* Meigen in the Neotropical region. The fundamental issue concerns to which genus assign a given species, since the Neotropical fauna markedly differs from the European congeners, and characters supposed to be non-overlapping between both genera are concomitantly found in several Neotropical diaphorine species. Some authors were troubled about those cases, sometimes addressing this issue even in the species names – e.g., *Chrysotus diaphorus* Parent, *C. paradoxus* Aldrich, *Diaphorus chrysotus* Parent. Only more recently Robinson and Vockeroth (1981) highlighted characters to distinguish these genera in a worldwide scale, what proved to be useful up to now.

During a recent visit of the first author to the Senckenberg Naturhistorische Sammlung Dresden (formerly Staatliches Museum für Tierkunde Dresden), the examination of the Dolichopodidae collection revealed material of eight Neotropical species of *Diaphorus* which should be transferred to *Chrysotus* – in Robinson and Vockeroth (1981)'s sense–, as well as an additional case of synonymy in this latter genus. In this paper, these nomenclatural changes are proposed and discussed. Moreover, a new species-group is established within *Chrysotus* and an identification key to the species of the group is provided.

Material and methods

Morphological terms follow Cumming and Wood (2009). All examined material in this study belongs to the Senckenberg Naturhistorische Sammlung Dresden (SNSD). Label data of specimens are cited verbatim in quotation marks, and their lines separated by " | ". Handwritten text in labels is reproduced in *italics*, while printed text is in regular font. Additional information is given in square brackets.

All specimens examined in this study have two basic labels, which are not repeated under respective material list: "Coll. W. Schnuse | 1911 – 3" (light green, referring to the collection of K. A. W. Schnuse) and "Staatl. Museum für | Tierkunde Dresden" (white). Type specimens usually have orange "syntypus" labels, added at the time of the publication of the Dolichopodidae type catalogue by Kallweit and Negrobov (1994). Selection of specimens labeled as syntypes was then based on information from original descriptions (U. Kallweit, personal communication). Nevertheless, those specimens also have "Typus" and "Paratypus" red labels, added before Uwe Kallweit became the curator in charge in the SNSD. Moreover, specimens labeled as "typus" also have handwritten labels of "type" (Parent's species) or "det. Beck." (Becker's), although there is no indication of what specimen is the "type" in the original descriptions. Accordingly all specimens must be considered syntypes and we hence designated and labeled specimens to be lectotypes and paralectotypes to ensure proper interpretation of the species names. In cases of descriptions based on a single specimen, that specimen was considered the holotype by monotypy (ICZN 1999: 73.1.2).

Results

Genus *Chrysotus* Meigen

Chrysotus comprises over 320 named species worldwide. We here follow Robinson and Vockeroth (1981)'s delimitation of the genus, assigning to *Chrysotus* only species with the following combination of characters: upper part of proepisternum bare; setae of calypter dark or pale; face narrowed below or parallel-sided; male fore tarsus with or without claws; male tergite 6 at least with one seta (usually many); setae on male sternite 8 not longer nor stronger than those on tergite 6.

All species treated below and originally described as *Diaphorus* have that set of characters and are hence transferred to *Chrysotus*. Nevertheless, the above mentioned characters also fit *Achradocera* Becker, *Falbouria* Dyte, and *Lyroneurus* Loew (see Capellari & Amorim 2012 for further discussion). The issue of transferring these species in this paper from *Diaphorus* to *Chrysotus* is in fact a matter of keeping at least a clear composition of *Diaphorus*. The paraphyly of *Chrysotus* is much more complicated and demands a broader study of the genus.

The *mediotinctus*-group

Diagnosis (based on males). Large-sized species of *Chrysotus* (5 mm or longer). Face and frons with parallel sides. Antennae yellow to orange, postpedicel sometimes brownish; antennal stylus apical. Thorax mostly shinning green, eventually with yellow areas (e.g., metepimere); acrostichals absent; six pairs of dorsocentrals; upper part of proepisternum, in front of anterior spiracle, bare. Wing: membrane hyaline or smoked, sometimes with a conspicuous transversal brown stripe; veins R_{4+5} and M_1 subparallel and slightly moved posteriad; distal section of vein CuA shorter than crossvein dm-cu (see Becker 1922: fig. 63; Parent 1929: fig. 30, 1931: fig. 24, 1934: pl. 68, fig. 14; Capellari & Amorim 2010: fig. 19). Legs: mostly yellow, middle coxa (sometimes also hind coxa) and apices of tarsi brown; pulvilli small; tarsal claws present. Abdomen: usually greenish, with coppery reflections dorsally and lateral yellow spots, sometimes from tergite 1 to 6; tergite 6 with setae and bristles restricted to posterior margin (Fig. 1-3). Hypopygium: partially hidden under tergite 6, surstyli as a single lobe, with short spine at apex (see Capellari & Amorim 2010: figs 5 and 6).

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Remarks: This group includes the following three species, dealt with below, as well as *C. maculatus* (Parent) (= *Diaphorus maculipennis* Robinson; holotype in the Natural History Museum of London, examined) and *C. singularis* Parent (holotype in the SNSD, examined). Some of the diagnostic characters listed above should be regarded as apomorphies (see Discussion), in such a way that gathering these five species in a group seems justified on a reasonable hypothesis of monophyly. The group is currently known only from South America: Surinam, Peru, Bolívia, and Brazil (Pará, Amapá, Maranhão, Mato Grosso, Minas Gerais, São Paulo).

Chrysotus luteipalpus (Parent), comb. n.

Diaphorus luteipalpus Parent, 1929: 190 (fig. 30)

Examined material: ♂, "Peru-Rosalina | *19.8.03* | Urubambafl." [dark green label]; "*Diaphorus* | *luteipalpus Par.* | [identified by] *O. Parent*" [white label].

Remarks: The specimen examined, identified by l'abbé Parent, fit the original description of the species (Parent 1929), although he did not mention the yellow metepimere.

Chrysotus mediotinctus (Becker), comb. n.

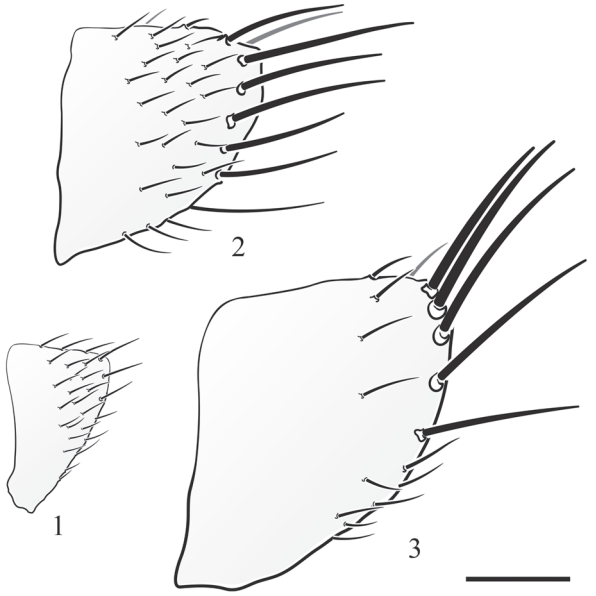
Diaphorus mediotinctus Becker, 1922: 168 (fig. 63).

Examined material: **LECTOTYPE** ♂, hereby designated, "Peru-Meshagua | 26.IX.03 | Urubambafl." [dark green label]; "*Diaphorus* | *mediotinctus* | det. Becker" [white label]; "♀" [*sic*, white label]; "Typus | *Diaphorus* | *mediotinctus Beck.*" [red label]; "*mediotinctus* | *Beck.*" [white label]; "SYNTYPUS | des. U. Kallweit | 1993" [orange label]; "Chrysotus | mediotinctus | (Becker) Lectotype | Capellari & Amorim 2014" [red label]. **PARALECTOTYPE** ♂, "Peru-Meshagua | 13.IX.03 | Urubambafl." [dark green label]; Paratypus | *Diaphorus* | *mediotinctus Beck.*" [red label]; "Chrysotus | mediotinctus | (Becker) Paralectotype | Capellari & Amorim 2014" [yellow label].

Chrysotus propinquus (Becker), comb. n.

Diaphorus propinquus Becker, 1922: 171

Examined material: **LECTOTYPE** ♂, hereby designated, "Peru-Meshagua | *13.X.03* | Urubambafl." [dark green label]; "*Diaphorus* | *propinquus B* | det. Becker" [white label]; "♀" [*sic*, white label]; "Typus | *Diaphorus* | *propinquus* ♂ | *Beck.*" [red label]; "*propinquus* | *Beck.*" [white label]; "SYNTYPUS | des. U. Kallweit | 1993" [orange label]; "Chrysotus | propinquus | (Becker) Lectotype | Capellari & Amorim 2014" [red label]. **PARALECTOTYPES** (all labeled as "Chrysotus | propinquus | (Becker) Paralectotype | Capellari & Amorim 2014" [yellow label]): ♀, "Peru-Rosalina | *20.8.03* | Urubambafl." [dark green label]; "*Diaphorus* | *propinquus Beck* | det. Becker" [white label]; "♀" [white label]; "Typus [*sic*] | *Diaphorus* | *propinquus* ♀ | *Beck*" [red label]. ♀, "Peru-Rosalina | *19.8.03* | Urubambafl." [dark green label]; "Paratypus | *Diaphorus* | *propinquus Beck*" [red label]. ♀, "Peru-Meshagua | *1.X.03* | Urubambafl." [dark green label]; "Paratypus | *Diaphorus* | *propinquus* | *Beck*" [red label].



Figs 1–3: Setation pattern on male tergite 6 of *Chrysotus* (left lateral): 1. *C. neglectus* (Wiedemann). – 2. *C. spectabilis* (Loew). – 3. *C. maculatus* (Parent). – Scale bar: 0.2 mm.

Remarks: Capellari and Amorim (2010) suspected this species and *Chrysotus mediotinctus*, comb. n. could be synonyms of *C. maculatus* (Parent). Examination of the types revealed main differences only in some aspects of the color pattern. *C. mediotinctus*, comb. n. has a darker and uninterrupted brown stripe on the wing membrane, coxa III brown, and metepimere concolorous with the pleura. *C. propinquus*, comb. n. is very similar to *C. mediotincutus*, comb. n., but has the stripe on wing membrane lighter, and the coxa III is yellowish. *C. maculatus* has yellow coxa III and metepimere, while the brown stripe on wing membrane is narrower than in *C. mediotinctus*, comb. n., interrupted between R_{4+5} and M_1 (not figured in Parent 1934: pl. 68, fig. 14). It is possible that all those characters can vary as a result of different degrees of melanization in a single species. We preferred, however, to keep all species as separate taxa until further evidence is available to take a more robust decision concerning a synonymy.

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Key to the species of the *mediotinctus*-group of *Chrysotus* (males)

1. Wing membrane hyaline 2
1'. Wing membrane with distinct brown spot 3
2. Coxa III and metepimere yellow ..... *C. luteipalpus* (Parent), comb. n.
2'. Coxa III and metepimere brown ..... *C. singularis* Parent
3. Spot on wing membrane interrupted at level between R_{4+5} and M_1 (Capellari & Amorim 2010: fig. 19) ..... *C. maculatus* (Parent)
3'. Spot on wing membrane uninterrupted (cf. Becker 1922: fig. 63) 4
4. Spot on wing membrane dark brown; coxa III brown ..... *C. mediotinctus* (Becker), comb. n.
4'. Spot on wing membrane light brown; coxa III yellow, brownish at base ..... *C. propinquus* (Becker), comb. n.

Unplaced species of *Chrysotus*

The species treated below are presently unassigned to any species group, although some features can be recognized. There is a brief consideration (see Discussion) on their possible placements.

Chrysotus amicus (Parent), comb. n.

Diaphorus amicus Parent, 1931: 10 (pl. 2: fig. 30)

Examined material: **HOLOTYPE** ♂, "Bolivia, Mapiri, St-Ernesto | 800m | 20.03.03" [dark green label]; "Typus | *Diaphorus* | *amicus Par.*" [red label]; "*Diaphorus* | *amicus n. sp.* | *O. Parent*" [white label]; "*Diaphorus sp*" [white label]; "*Diaphorus sp*" [white label]; "Chrysotus | amicus | (Parent) Holotype | Capellari & Amorim 2014" [red label].

Remarks: The male holotype is in relatively poor condition, with head and thorax badly damaged. Nevertheless, relevant characters to combine the species with *Chrysotus* are fairly evident.

Chrysotus ciliatus (Becker), comb. n.

Diaphorus ciliatus Becker, 1922: 165
Chrysotus superbiens (Parent), 1931: 11, comb. n. (*Diaphorus*) et syn. n.

Examined material: *Chrysotus ciliatus* (Becker), comb. n.: **HOLOTYPE** ♂, "Peru-Meshagua | 9.10.03 | Urubambafl." [dark green label]; "*Diaphorus* | *ciliatus Beck.* | det. Becker" [white label]; "♀" [*sic*, white label]; "Typus | *Diaphorus* | *ciliatus Beck.*" [red label]; "*ciliatus* | *Beck.*" [handwritten, white label]; "SYNTYPUS | des. U. Kallweit | 1993" [orange label] ; "Chrysotus | ciliatus | (Becker) Holotype | Capellari & Amorim 2014" [red label].

Chrysotus superbiens (Parent), comb. n.: **HOLOTYPE** ♂, "Peru-150m | 25.11.03 | Pachitea-Münd." [dark green label]; "Typus | *Diaphorus* | *superbiens* | *Par.*" [red label]; "*Diaphorus* | *superbiens n. sp.* | *O. Parent*" [white label]; "SYNTYPUS | des. U. Kallweit | 1993" [orange label]; "Chrysotus | superbiens | (Parent) Holotype | Capellari & Amorim 2014" [red label].

Remarks: *Chrysotus ciliatus*, comb. n. and *C. superbiens*, comb. n., both described from Peru, showed no conspicuous differences and therefore are regarded as synonyms. The species can be recognized by the approximated eyes on the frons, acrostichals in a single row, legs, except coxae and apices of tarsi, yellow, short anterior ciliation on hind tibia, and two claws in all legs.

Chrysotus hamatus (Parent), comb. n.

Diaphorus hamatus Parent, 1931: 11 (pl. 2: fig. 31)

Examined material: **HOLOTYPE** ♂, "Peru-150m | 26.11.03 | Pachitea-Münd" [dark green label]; "Typus | *Diaphorus* | *hamatus Par.*" [red label]; "*Diaphorus* | *hamatus n. sp.* | *O. Parent*" [white label]; "SYNTYPUS | des. U. Kallweit | 1993" [orange label]; "Chrysotus | hamatus | (Parent) Holotype | Capellari & Amorim 2014" [red label].

Chrysotus vicinus (Becker), comb. n.

Diaphorus vicinus Becker, 1922: 174 (figs. 65, 66), nec *Chrysotus vicinus* Parent, 1933: 380

Examined material: **LECTOTYPE** ♂, hereby designated, "Peru-Rosalina | *31.8.03* | Urubambafl." [dark green label]; "103" [white label]; "Typus | *Diaphorus* | *vicinus Beck.*" [red label]; "*vicinus* | *Beck.*" [white label]; "SYNTYPUS | des. U. Kallweit | 1993" [orange label]; "Chrysotus | vicinus | (Becker) Lectotype | Capellari & Amorim 2014" [red label]. **PARALECTOTYPE** ♂, "Peru-Rosalina |

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28.8.03 | Urubambafl." [dark green label]; "Paratypus | *Diaphorus* | *vicinus Beck.*" [red label]; "Chrysotus | vicinus | (Becker) Paralectotype | Capellari & Amorim 2014" [yellow label].

Remarks: As a consequence of the new combination here established, the New Zealand species *Chrysotus vicinus* Parent,1933 becomes a junior secondary homonym of *C. vicinus* (Becker). As such, the replacement name *C. kallweiti* Capellari & Amorim, nom. n. is proposed for Parent's species. The species is named after Dr. Uwe Kallweit, who supported the first author during a visit to the SNSD.

Chrysotus viridis Becker

Chrysotus viridis Becker, 1922: 200
Chrysotus diligens Parent, 1931: 7, syn. n.

Examined material: *Chrysotus viridis* Becker: **LECTOTYPE** ♂, hereby designated, "Peru *21.I.04* | *3–4000m.* | Tarma" [dark green label]; "Typus | *Chrysotus* | *viridis Beck.*" [red label]; "*Chrysotus* | *viridis Beck.* | det. Becker" [white label]; "♀" [*sic*, white label]; "Chrysotus | viridis | Becker Lectotype | Capellari & Amorim 2014" [red label]. **PARALECTOTYPES** (all labeled as "Chrysotus | viridis | Becker Paralectotype | Capellari & Amorim 2014" [yellow label]): 2 ♂♂, "Peru *21.I.04* | *3–4000m.* | Tarma" [dark green label]; "Paratypus | *Chrysotus* | *viridis Beck.*" [red label]. 2 ♂♂, "Peru *16.II.06* | Urubamba | 3000 mtr." [dark green label]; "Paratypus | *Chrysotus* | *viridis Beck.*" [red label]; "SYNTYPUS | des. U. Kallweit | 1993" [orange label]. 4♀♀: "Peru | *21.I.04* | Tarma" [dark green label]; "Paratypus | *Chrysotus* | *viridis Beck.*" [red label]. ♀: "Bolivia | *21.XII.02* | Sorata 2300m" [dark green label]; "Paratypus | *Chrysotus* | *viridis Beck.*" [red label]. ♀, "Bolivia | *23.XII.02* | Sorata 2300m" [dark green label]; "Paratypus | *Chrysotus* | *viridis Beck.*" [red label]. ♀, "Peru-Puno | *22.XII.02* | Titicaca-See" [dark green label]; "Paratypus | *Chrysotus* | *viridis Beck.*" [red label]. 4 ♂♂, "Peru Cuzco | *8.4.05* | 3700–4200m" [dark green label]. 2 ♂♂, "Peru Cuzco | *6.4.05* | 3600–4200m" [dark green label]. 2 ♂♂, "Peru Cuzco | *31.V.05* | 3200–4200m" [dark green label]. ♂, "Peru Cuzco | *1.6.05* | 3200–4200m" [dark green label]. 2 ♂♂, "Peru | Cuzco | O. Garlepp c." [dark green label]. ♂, "Peru-Puno | *16.XI.02* | Titicaca-See" [dark green label]. ♂, "Bolivia-Guaqui | *30.V.03* | Titicaca-See" [dark green label]. 2 ♂♂, "Peru *21.II.06* | Urubamba | 3000 mtr." [dark green label]. 2 ♂♂, "Mamara | Peru | W. Schnuse" [dark green label]; "*3000m*" [dark green label].

Chrysotus diligens Parent. **LECTOTYPE** ♂, hereby designated, "Peru *22.II.06* | Urubamba | 3000 mtr." [green label]; "Typus | *Chrysotus* | *diligens Par.*" [red label]; "SYNTYPUS | des. Uwe Kallweit | 1993" [orange label]; "Chrysotus | diligens | Parent Lectotype | Capellari & Amorim 2014" [red label]. **PARALECTOTYPES** (all labeled as "Chrysotus | diligens | Parent Paralectotype | Capellari & Amorim 2014" [yellow label]): ♂, "Peru *22.II.06* | Urubamba | 3000 mtr." [green label]; "Paratypus | *Chrysotus* | *diligens Par.*" [red label]; "SYNTYPUS | des. Uwe Kallweit | 1993" [orange label]. 10 ♂♂, "Peru *22.II.06* | Urubamba | 3000 mtr." [green label]; "Paratypus | *Chrysotus* | *diligens Par.*" [red label]. 4 ♂♂, "Peru Cuzco | *8.4.05* |3700–4200 m"; "Paratypus | *Chrysotus* | *diligens Par.*" [red label]. ♂, "Peru Cuzco | *1.VI.05* |3300–4200 m"; "Paratypus | *Chrysotus* | *diligens Par.*" [red label]. 2 ♂♂, "Peru Cuzco | *19.VI.05* |3300–*34*00 m"; "Paratypus | *Chrysotus* | *diligens Par.*" [red label]. 2 ♂♂, "Peru-Puno | *19.VI.05* |Titicaca-See"; "Paratypus | *Chrysotus* | *diligens Par.*" [red label]. ♂, "Bolivia-Guaqui | *1.VI.03* |Titicaca-See"; "Paratypus | *Chrysotus* | *diligens Par.*" [red label].

Remarks: Comparison of the type specimens of these species revealed no remarkable differences between *Chrysotus viridis* and *C. diligens*. We herein consider both species synonyms. Moreover, Becker (1922)'s description of *C. viridis* is inaccurate: it refers to a black palpus, which is actually whitish yellow, as mentioned in Parent's (1931) description of *C. diligens*, although in some specimens it is somewhat opaque and misleading depending on light incidence. Becker (1922) listed 5 males and 25 females in his type series of *C. viridis*, but only 29 specimens (22 males and 7 females), 7 of them with type red labels, were found. We selected the specimen with both the "typus" and the Becker's handwritten labels to be the lectotype, although it is not any of the syntypes designated by Kallweit and Negrobov (1994).

Discussion

Species of *Chrysotus* have been rarely assigned to species-groups, and there are few contributions towards an inner arrangement of the genus (e.g., Bickel & Sinclair 1997, Wei & Zhang 2010). The species of *Chrysotus* treated here can be assigned to three informal groups based on their general appearance (groups that are not necessarily monophyletic).

The first group includes *C. viridis* and has similar habitus to the small-sized Palearctic species of the genus. Usually the male has a narrowed face and tergite 6 covered by setae of similar length (Fig. 1).

The second group is abundant in the New World, including *C. amicus*, *C. ciliatus*, *C. hamatus*, and *C. vicinus*. These species resemble *C. spectabilis* (Loew, 1861) in overall habitus and usually share most of the following features: larger specimens, eyes approximated above antennae in males (sometimes obliterating frons), and male tergite 6 with long marginal bristles (Fig. 2). Species of this second group were occasionally treated as *Diaphorus* by authors in the past (e.g., Van Duzee 1915, Robinson 1975) and

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a number of them are still to be transferred to *Chrysotus*. This, however, depends on the examination of primary types, since original descriptions are often inadequate to address some of the relevant characters.

The third group includes *C. luteipalpus*, *C. maculatus*, *C. mediotinctus*, *C. propinquus* and *C. singularis*, referred to here as the *mediotinctus*-group. This can be regarded as a small clade within *Chrysotus*. All species of this group have a distinctive habitus, with large specimens, face and frons parallel-sided (eyes not converging above or below the antennae), and male tergite 6 with setae and bristles restricted to the hind margin of the sclerite (Fig. 3). The setation on tergite 6, along with the distal section of CuA shorter than dm-cu, should be regarded as apomorphies within *Chrysotus*, supporting the hypothesis of monophyly for this group. The distal section of CuA shorter than dm-cu is a common diagnostic feature for members of the subfamily Hydrophorinae, but such a pattern is unknown for any other species of *Chrysotus* and even for Diaphorinae. The way the setation is distributed on male tergite 6 in *Chrysotus* can be broken down into several different states (e.g., Figs 1-3), useful to separate species and groups of species. Nevertheless, this character has been underused in the taxonomy of the genus. It is hard to say without a wider study if the male tergite 6 is primitively setose or bare for the Diaphorinae. The condition seen in the members of the *mediotinctus*-group, however, is unique and probably resulted from the loss of anterior setae in an ancestral species with tergite 6 anteriorly setose – the condition found in virtually all other extant species of *Chrysotus*.

One species of the *mediotinctus*-group, *C. maculatus*, was recently assigned to the genus *Dubius* Wei, along with species of the above mentioned second group —namely *C. angustifrons* (Robinson, 1975), *C. robustus* (Robinson, 1975), *C. spectabilis*, and *C. wirthi* (Robinson, 1975), all Neotropical – and five Oriental species from Southwestern China (Wei 2012). As originally proposed by Wei (2012), *Dubius* seems to assemble different lineages of *Chrysotus*, but the lack of a convincing diagnosis for the genus *Dubius* is still an issue to be addressed. A close relationship between the *mediotinctus*-group and *Dubius* based on the assignment of *C. maculatus* to that genus, however, is certainly spurious. No evident synapomorphy can be presently identified for the *mediotinctus*-group plus *Dubius*. As such, we regard the systematic position of the *mediotinctus*-group relative to other species of *Chrysotus* currently unknown. Moreover, further investigation is necessary to check if the type-species of *Dubius* – *D. curtus* Wei 2012 – composes a clade with the remainder of the species in the genus. Once considered this issue, conservation of that generic name can be better evaluated, as well as if it is worth applying to other species of *Chrysotus*.

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